



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,768	02/24/2006	Tomoaki Ito	00682P00620US	6077
32116	7590	09/17/2008	EXAMINER	
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER			NEGRON, DANIELL, L	
500 W. MADISON STREET			ART UNIT	PAPER NUMBER
SUITE 3800			2627	
CHICAGO, IL 60661			MAIL DATE	DELIVERY MODE
			09/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/569,768	Applicant(s) ITO, TOMOAKI
	Examiner Daniell L. Negron	Art Unit 2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 24 February 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4,6-10 and 12-15 is/are rejected.
 7) Claim(s) 5 and 11 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 24 February 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on February 24, 2006 and have been considered by the examiner.
2. Items "AM" and "AN" of the IDS submitted on February 24, 2006 were not considered since they are Japanese language documents and no English equivalent or translation was provided.
3. Items "AF", "AG", "AH", "AJ", and "AK" of the IDS submitted on August 27, 2007 were not considered since they are Japanese language documents and no English equivalent or translation was provided.

Claim Objections

4. Claim 11 is objected to because of the following informalities: Line 3 of claim 11, begins "200 Hand", Examiner considers this a typo and should be corrected to read "200 H and.". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "large size" in claim 8 is a relative term which renders the claim indefinite. The term "large size" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably

apprised of the scope of the invention. For the purposes of examination, a magnetic recording medium of large size is being considered as a medium of at least 5.25" diameter since medium of smaller size are known.

7. Claim 8 recites the limitation "at least one coil" in lines 2 and 6 of said claim. There is insufficient antecedent basis for this limitation in the claim. Claim 1, from which claim 8 depends only requires that there be a single coil, while claim 8 refers to "at least one coil" as if there were more than the single coil mentioned in claim 1.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4, 6, 9, 10, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Schultz et al U.S. Patent No. 5,969,933.

Regarding claim 1, Schultz et al disclose a magnetic data eraser comprising a power supply circuit adapted to generate an attenuating alternating voltage whose peak value reduces (i.e., decays via an LC circuit) as time passes (Fig. 3),

a receptacle (8 and 10) adapted to accommodate a magnetic recording medium (see Fig 2), an electric coil (16 and 24) for degaussing the magnetic recording medium, being adapted to apply the attenuating alternating voltage generated in the power supply circuit to the coil to generate within the receptacle an attenuating alternating magnetic field whose peak value of magnetic flux density reduces as time passes (column 10, lines 17-27).

Regarding claim 2, Schultz et al disclose a magnetic data eraser wherein the receptacle is adapted to accommodate a computer body (i.e., disk drive) incorporating a magnetic recording medium and to erase magnetic data on the magnetic recording medium incorporated in the computer body accommodated in the receptacle (column 9, lines 9-17).

Regarding claim 3, Schultz et al disclose a magnetic data eraser wherein the coil (16 and 24) is wound around the outer periphery of the receptacle (column 9, lines 46-58).

Regarding claim 4, Schultz et al disclose a magnetic data eraser wherein the power supply circuit comprises a capacitor (46 and 48) and a charging circuit (42) for charging the capacitor and is adapted to discharge an electrical charge in the capacitor via the coil (column 10, lines 17-21).

Regarding claim 6, Schultz et al disclose a magnetic data eraser having a plurality of coils (16 and 24) wound around discrete parts of the outer periphery of the receptacle (see Figs. 1a-d show how coils 16 and 24 are wound around discrete areas of the receptacle), being adapted to sequentially generate an attenuating alternating magnetic field within the receptacle corresponding to the parts around which the coils are wound by sequentially applying a voltage applied from the power supply circuit to each of the coils (column 10, lines 42-46). Furthermore, it is considered that the device disclosed by Schultz et al sequentially applies a magnetic field since each field generated by coils 16 and 24 are 90 degrees out of phase from one another.

Regarding claim 9, Schultz et al disclose a magnetic data eraser wherein the power supply circuit has a polarity reversing switch for reversal of voltage polarity applied to the coil (column 11, lines 14-22).

Regarding claim 10, Schultz et al disclose a magnetic data eraser comprising a capacitor (48) to which a predetermined DC voltage is applicable, an electric coil (16 and 24) for generating a magnetic field and connected to the capacitor in parallel, and a switching device (52 and 56) interposed between the capacitor and the coil,

being adapted to erase magnetic data by means of a magnetic field generated by the coil by controlling the switching device to discharge an electrical charge charged in the capacitor (column 10, lines 17-27 and column 11, lines 14-22),

wherein the coil has an inductance and an internal resistance and the capacitor has an applied voltage (which are considered inherent properties of said electrical elements), each being set at a predetermined value so that the discharge of the capacitor generates a rebound phenomenon at least once, whereby a direction of the magnetic field is reversed by a reversed electrical current flowing in the coil with a change in polarity of transient voltage (column 10, lines 17-27 and column 11, lines 14-22). Furthermore, it is considered that the discharge of the capacitor generates a rebound phenomenon since it is disclosed that the currents in the coil reverse in polarity (i.e., oscillate).

Regarding claim 13, Schultz et al disclose a magnetic data eraser wherein the coil (16 and 24) has a wire diameter of 1.2mm or more (column 9, lines 9-11, where $0.32"$ = 8.128mm).

Regarding claim 14, claim 14 has limitations similar to those treated in the above rejection of claim 2, and are met by the reference as discussed above.

Regarding claim 15, method claim 15 is drawn to the method of using the corresponding apparatus claimed in claim 10. Therefore method claim 15 corresponds to apparatus claim 10 and is rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz et al U.S. Patent No. 5,969,933.

Regarding claim 8, Schultz et al disclose a magnetic data eraser wherein at least one coil (16 and 24) is wound around the outer periphery of the receptacle (Fig. 2), and wherein the receptacle is adapted to accommodate a computer body (i.e., disk drive) or a magnetic recording medium of large size (column 9, lines 9-17), but fail to explicitly disclose or suggest the coil being adapted to generate a magnetic field strength within a range of 358000 A/m to 438000 A/m.

However, as disclosed by Schultz et al it is considered well known in the art that the strength of the magnetic field of a magnetic data eraser must exceed the switching strength of the magnetic domains of the media. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the claimed ranges to the device disclosed by Schultz since establishing the optimum field strength range would have involved routine experimentation. Furthermore, it has been held that it is not inventive to discover the

optimum or workable ranges by routine experimentation in the absence of criticality (*In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)).

Regarding claim 7, claim 7 has limitations similar to those treated in the above rejection of claim 8, and are met by the reference as discussed above.

Regarding claim 12, Schultz et al disclose a magnetic data eraser comprising all the limitations of claim 1 as discussed above, but fail to explicitly disclose a box-shaped casing made of a magnetic material adapted to accommodate the coil therewithin. However, Schultz et al provides that it is well known in the art that steel casings can be used for the purpose of providing improved distribution of the magnetic flux that is output by the coils and to further reduce stray fields (column 8, lines 54-64). Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide a box-sized steel enclosure to the magnetic data eraser disclosed by Schultz since a person with ordinary skill has good reason to pursue the known options within his or her technical grasp if this leads to an expected result.

Allowable Subject Matter

12. Claims 5 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, prior art fails to disclose or suggest a magnetic data eraser comprising all the limitations of claim 1, further wherein the power supply circuit comprises a plurality of capacitors connected in series and a plurality of charging circuits for charging the respective

capacitors and is adapted to discharge an electrical charge charged in each of the capacitors via the coil.

Regarding claim 11, prior art fails to disclose or suggest a magnetic data eraser comprising all the limitations of claim 1, further wherein the coil has an inductance between 100 H and 200 H, an internal resistance between $2.5\ \Omega$ and $5\ \Omega$, and wherein the capacitor has a capacity between 4700 μF and 9400 μF .

Prior Art

The following references are cited as of interest for disclosure of data erasers comprising structure for reducing a magnetic flux over time, similar to Applicant's claimed invention:

Maddox U.S. Patent No. 3,895,270

Seely et al U.S. Patent No. 4,551,782

Schultz et al U.S. Patent No. 7,061,948

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is (571)272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniell L. Negrón/
Examiner, Art Unit 2627
September 11, 2008